

Notice of Allowability

Application No.

10/665,910

Examiner

Kevin M. Bernatz

Applicant(s)

KUDO ET AL.

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview of 9/6/06.
2. ☒ The allowed claim(s) is/are 8-10,12 and 14-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20060913.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Examiner's Amendment

1. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

- The title has been amended as follows: after "Head", the following phrase/word was inserted: "Utilizing a CoNiFe Alloy With 60 – 80 Weight Percent Fe".

2. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with Mr. Chun-Pok Leung on September 7, 2006.

The application has been amended as follows:

- Claim 12, line 10: after "plating bath", the following phrase was inserted:
"having pH value of 2 or less and"; and
- Claim 13 was cancelled.

Reasons for Allowance

4. The present claims are deemed allowable over the references of record since the references of record fail to disclose or render obvious the ability to plate a high saturation magnetic flux density CoNiFe film meeting the claimed composition limitation to a thickness meeting the claimed thickness limitation.

While the prior art of record disclose CoNiFe films possessing saturation magnetic flux density and compositions meeting the claimed limitations, the prior art of record fail to teach or render obvious the necessity of a plating bath having a pH of 2 or less in combination with saccharin sodium in order to produce plating films having thickness values of 3 μm or more. The Examiner notes that scaling to thicker films via plating is not a trivial process, and while Chen et al. disclose plated films of thickness values ranging from 0.7 – 1.3 μm , none of the prior art of record teach or render obvious the ability to coat such films to a thickness of 3 μm or more while maintaining the claimed property limitations.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Examiner's Comments

6. In order to better clarify the record, the examiner wishes to point out Cooper et al. (U.S. Patent No. 2003/0209295 A1), which disclose a high saturation magnetic flux density film via plating (*Paragraph 0033*), as well as the difficulty in plating magnetic films to large thickness values while maintaining good magnetic properties (*Paragraphs 0004 – 0030*). Despite Cooper et al. explicitly desiring thicker films, Cooper et al. fail to disclose film thickness values larger than 2 μm (*Paragraph 0032*) and also only disclose the use of binary CoFe alloys, not ternary CoNiFe alloys (*entire disclosure*).

Li et al. (U.S. Patent No. 2003/0085131 A1) disclose plated Fe-rich FeCoNi films having a thickness meeting applicants' claimed range (1 – 5 μm) plated from a bath with a pH of 2 – 4, but fail to teach or render obvious the ability to obtain a saturation magnetic flux density greater than 2.2 T (22,000 gauss) (*Paragraphs 0025 – 0029 and Table 1*).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (571) 272-1505. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

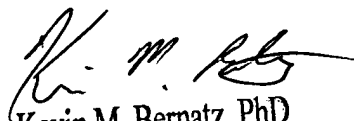
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMB

September 12, 2006



Kevin M. Bernatz, PhD
Primary Examiner